

Literacy and the student at the cause/effect level

By Kim Haynes and Karen Nelson

All children, regardless of cognitive or physical abilities, CAN participate in the reading process. After reviewing research over the last several years, three things have become evident: the process of learning to read is similar for both students that are verbal and non-verbal; children have to become active participants in the reading process; and learning to read must be expected.

Difficulties with the literacy process

Children who require AAC tend to have literacy materials in their homes similar to those of their typically developing peers, however, they have significantly less access to printed materials and seldom engage in early "writing" or drawing activities. Because children with physical or cognitive disabilities may interact or respond differently from their peers, caregivers and teachers may not always pick up on subtle interactive gestures and cues. We know that with our students using AAC, adults and/or verbal communication partners tend to dominate the conversation/interaction, thereby providing fewer opportunities for our students to actively participate and to take communicative turns. Often, communication partners emphasize the more mechanical aspects of books, such as turning pages, lifting flaps, etc., and therefore are not providing opportunities in a natural context. This makes it difficult for the AAC user to develop skills within story-

reading activities. Lack of verbal responsiveness and/or clarity of non-verbal cues due to cognitive or motoric difficulties make it extremely difficult to know what the child "truly" understands, as well as his/her preferences and interests. This makes it extremely difficult for communication partners, who are not educated in this area, to really know how to go about including the students using AAC. It is therefore imperative that intervention focuses on the adult partners, as well as adapting materials for the children.

Becoming active

It is extremely important to involve children in the reading process at an early age. This statement is true for all children, but it is especially profound for children with disabilities. Often, children with disabilities do not interact in the same manner as their peers. They may not speak and therefore cannot name pictures or ask questions. They may not have the motoric ability to choose a book, point to pictures, or turn pages; and they may not have the visual acuity to attend to two-dimensional pictures. It is thereby our responsibility to adapt the materials so that all children can learn. Unfortunately, we still walk into classrooms today and see children sitting in their wheelchairs or in the back of the classroom while all of the other children sit in a circle on the floor. These children immediately learn that they are "different", and they can't do what the other children are doing. They also learn that if they

just sit and smile, they don't have to participate. This is a fabulous recipe for "learned helplessness" and must be discarded immediately. Children with disabilities must be provided with the same opportunities as their peers. Making a few environmental changes can begin the foundation of success. Arrange the classroom so the child with a disability can sit with his/her peers. Adapt or present a book in an alternate format so the child can see and hear the same as all children and interpret all vocalizations or movements as meaningful. If a child experiences success early on, he/she will be motivated to "read" again; and this cycle of success/motivation will keep the child in an active state, always wanting to do more.

Expectations

First impressions are not always accurate. Too often, we see a child that is non verbal with physical limitations in a classroom with more time spent on physical needs than academic endeavors. Not that positioning and "pottying" aren't important, but we spend so much time on these tasks that there is seldom time for "schoolwork." It is also easier to address the physical needs than to create/adapt educational materials. However, this is the area that is most important of all. Your first and second attempts at adaptations don't always work. You may have to think outside of the box or ask for suggestions from other professionals. However, we, the authors, truly believe that all children have the potential to learn. They may not learn in the same way

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or at the same pace as other children, even those with similar disabilities, but they can learn. Any small gain is a step in the right direction. Don't let time be a determining factor. For some children, a year is not too long, and any gain is still a gain. There is one thing that we can absolutely guarantee; if you do not expect a child to participate in literacy activities, read or give them the opportunity to do so, a child will not learn how to participate and/or read.

Fostering literacy

We must try to remember to provide our AAC users with the same materials (adapted as needed) and opportunities as their speaking peers. For the AAC user's communication partners (parent, teacher, paraprofessionals, therapists), some helpful suggestions to follow might include:

- Use the child's AAC system while reading text, this will provide the student with additional modeling.
- Pause and wait expectantly for the child to participate (a minute is not too long in some instances....but will feel like an eternity to a speaking partner).
- Ask short, simple, appropriate, open-ended questions that are related to the book and the child's experiences while modeling the use of the AAC system. Do not ask only yes/no questions; give the child a choice. For example, "Did the cow jump over the house or the moon?"
- Respond appropriately to the communication attempts made by the child. Don't say "Good talking!"; respond to the communication attempt, "Yes, you're right, the cow jumped over the moon."

Reading adaptations at the cause/effect level

Single location/one message

At this level, books with repetitive storylines are extremely effective. You can program a single location voice-output device with the repetitive phrase. Matching symbols/icons can be placed in the book and on the device. As the book is read, the child can "read" his/her part when cued. Even though the child may not understand the "essence" of the story, they are learning turn-taking skills and matching. By becoming "successful readers", they are motivated to "read" more and attempt more difficult tasks. (Figure 1)

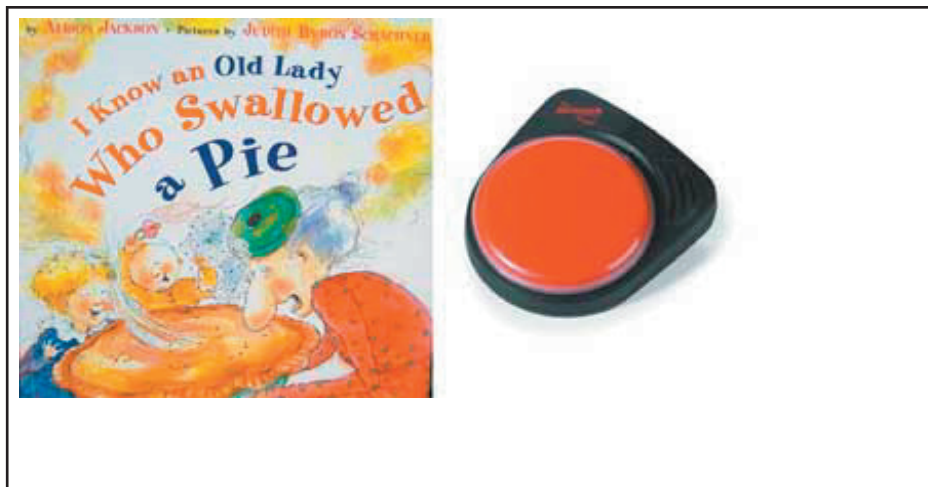


Figure 1: Single location/one message.

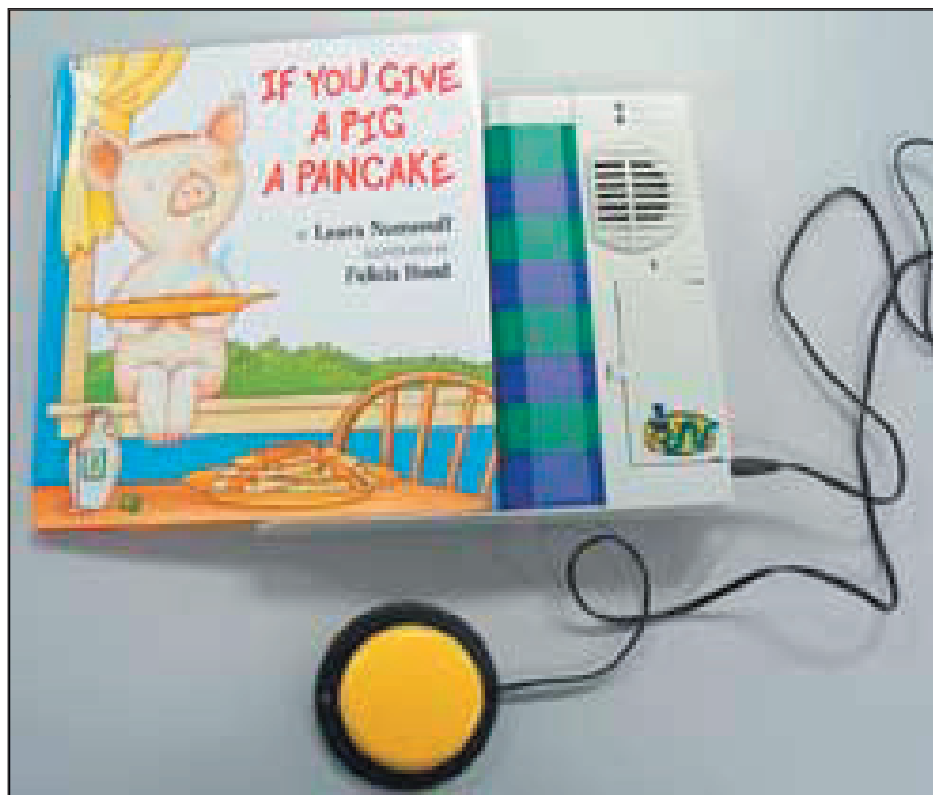


Figure 2: Single location/multiple messages.

Single location/multiple messages

For stories that have more than one repetitive phrase, such as *The Little Red Hen*, a device, such as the Step-by-Step by Ablenet, can be very useful. By programming in all of the messages: "Not I, said the goose", "Not I, said the cat", "Not I, said the dog", "Then I shall do it myself, said the hen", the child can now "read" four pages. Wow! How motivating is that! Another idea is to allow all of the children to act out their part and pass the device around, allowing each child to say their "lines".

Another example of reading at this level is using a switch with Ablenet's Bookworm. By depressing the switch, the child can now "read" an entire book. This device will allow the switch user to "read" each page sequentially. This device also encourages class participation. The child that has the physical ability to touch/press the message locations can "read" a page by matching the color tabs or by matching pictures when an overlay is inserted into the device. With this device, reading becomes a great class adventure. (Figure 2)

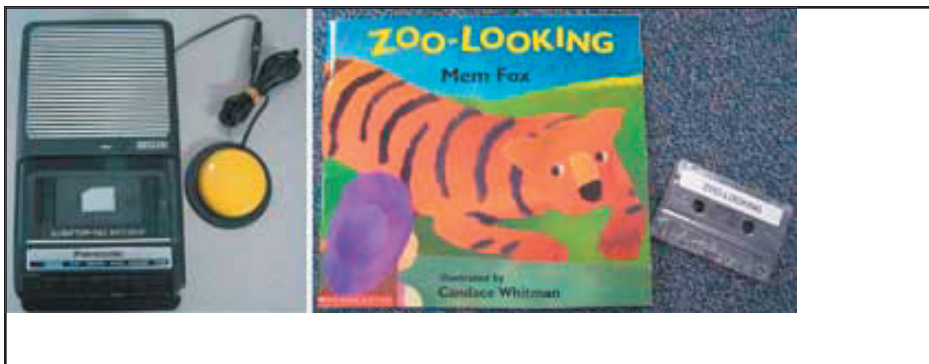


Figure 3: Adapted tape recorder.

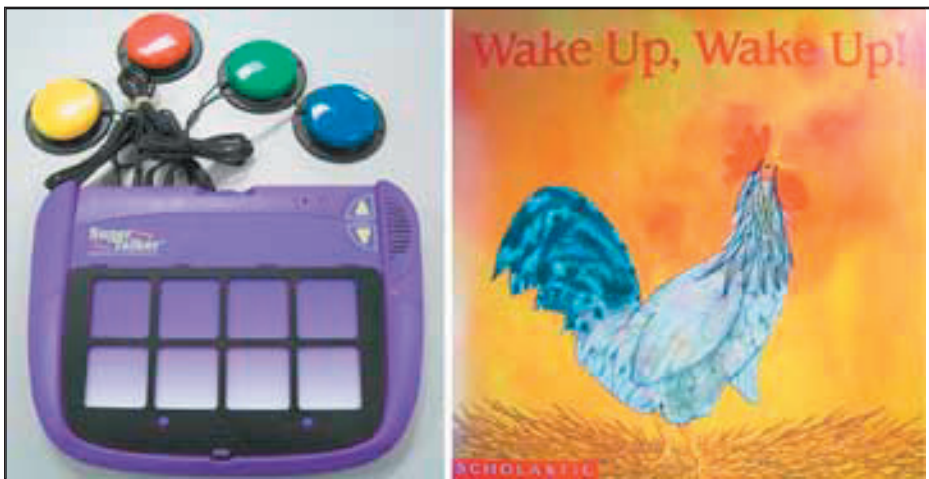


Figure 4: Multi-location with switch access.

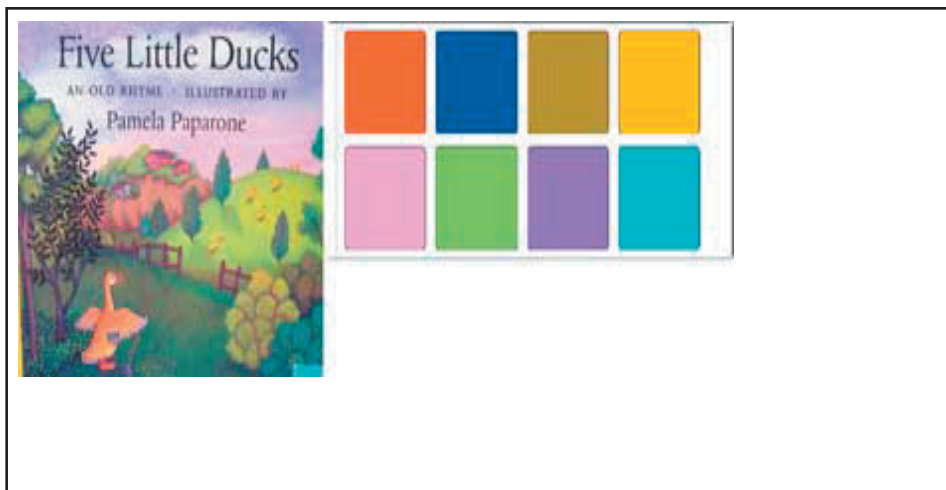


Figure 5: Color coding.

Adapted tape recorder

This is a simple low tech application for the switch user to access or “read” a story. Adapted tape recorders are available commercially, or simply add a battery interrupter to any standard battery operated tape recorder. You can record your own books on tape as well as buy them commercially. We

also suggest the use of a switch-latch timer (Don Johnston) so that the child is required to activate the switch multiple times in order to read/hear the story. If you use only a single switch, the student may rest on the switch and not thoroughly understand the cause/effect relationship. He/she may have accomplished their goal, but you have not accomplished yours. (Figure 3)

Multi-location with switch access

The SuperTalker is just one example of a device that can be used with multiple switches and overlays. What a great way to include the entire class. Each student can have his/her own switch with a corresponding symbol placed on it, or you can color code the background of the overlay (with or without symbols) to match the switch. This is a powerful way to provide the student with lots of cues to assist him/her with success during the reading process. Of course, there are other devices on the market, and you need to use what you have available. The SuperTalker comes with grids for one, two, four, and eight locations so that, as the child progresses, the device “grows” with him. The use of levels is also beneficial when a child can handle only a few locations and will therefore need multiple overlays to read an entire story. You can simply change the level and give the child access to pre-programmed vocabulary. (Figure 4)

Color coding

When we think of an adapted book, we most often think of the overlay with the corresponding symbol on the page of the book. For our students with significant impairments, this may be cognitively too difficult. At a workshop conducted by Carol Goosen (aacintervention.com), a great solution was provided ... use a color coded overlay. This adaptation can be made for a single switch or device and can be created with any overlay design software or simply with “sticky notes” in a variety of colors. The latter is by far the least expensive. All you need to do is put a different colored sticky note on each switch/location and use the corresponding color on the page of the book. Voila, you’re done! This is also great when you have a repetitive story line as it will always be the same color. As the child progresses, you can then add the symbol with the color coded background to aid in the transition to icon/symbol use. (Figure 5)

Other strategies

Communication vests are a great way to add the supplemental vocabulary and continually provide the modeling that our students need in order to experience success.

Light cues are also beneficial. Use a small flash light to direct the student’s attention to the switch or symbol.

Make the pages tactile by adding tactile enhancements to the various pictures on the

page (big buttons for the eyes, soft cotton for the fur on an animal) and then add the same to the symbols on the switch, overlay, etc. Give a child a reason to reach out and touch a book. This is also a great adaptation for the child with visual impairments.

Let the children use a switch and simple spinner to select who reads next. You can buy one commercially or make your own by adapting battery operated spinners from games. You can also place pictures on a manual communication strip. The one shown uses PCS symbols (Mayer Johnson) on a terry cloth back scrubber from our local dollar store. These also make great daily schedules for the classroom. (Figure 6)

Switch toys can be turned into main characters. Don't just let your switch toys sit in a closet after the children have become bored with them. Turn them into a character of the book. Simply attach a large picture of the main character on the toy. Like magic, your toy can be transformed into anything. In the book, *Buzz, Said the Bee*, we turned our dog into the bee. We also used miniature animals. When the child activated the switch, the "bee" moved and knocked down all the animals, just like in the story. What a great way to bring the story to life. (Figure 7)

There are so many ways to include the child learning cause/effect in the literacy process. Hopefully, you have garnered a few ideas. No matter what the child's cognitive or motoric abilities, everyone can participate in the reading process – if we expect it. The most important thing to remember is that you can include EVERY child in the reading process! Think outside the box and have fun. All children can learn and "read"!

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Figure 6: Spinner and terry cloth back scrubber.

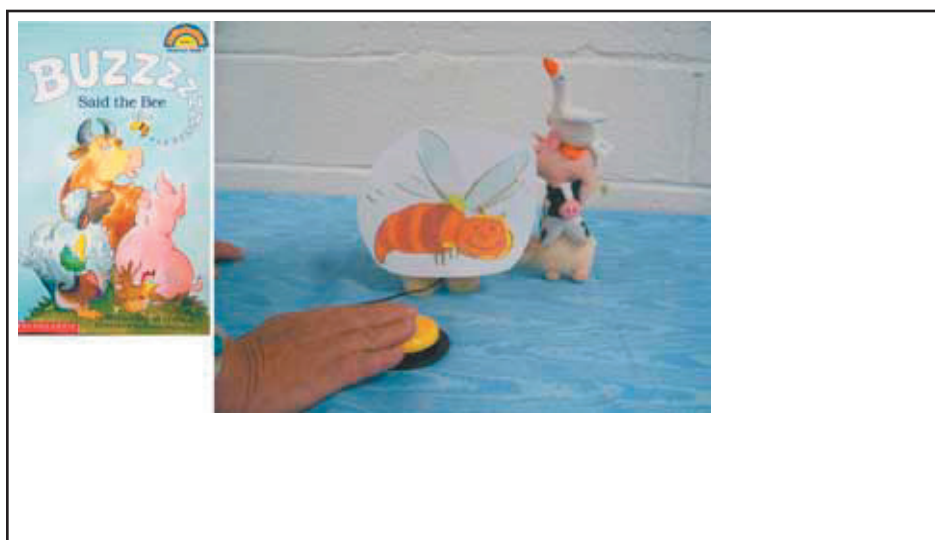


Figure 7: Using a switch toy as the main character.